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The relationship between access to finance and growth of SMEs in developing economies: financial literacy as a moderator

Abstract

Purpose – The main purpose of this paper is to establish the moderating effect of financial literacy in the relationship between access to finance and growth of SMEs in developing economies. Thus, this study seeks to establish whether financial literacy moderates the relationship between access to finance and growth of SMEs in a developing economy like Uganda.

Design/methodology/approach – Cross sectional research design was employed in the study and data were collected from 169 SMEs located in Jinja and Iganga central markets. ModGraph (Excel programme) was used to test for the moderating effect of financial literacy in the relationship between access to finance and growth of SMEs in developing economies.

Findings – The findings reveal a positive and significant moderating effect of financial literacy in the relationship between access to finance and growth of SMEs in developing economies. In addition, financial literacy and access to finance also have significant and positive effects on growth of SMEs in developing economies.

Research limitations/implications – The study collected data from only SMEs located in Uganda, and there is an opportunity to test this finding in other developing economies. Furthermore, the findings from the study are based on quantitative data collected through use of semi-structured questionnaires. Besides, the study was purely cross-sectional hence, ignoring the characteristics of SMEs, which could be investigated using longitudinal study design.

Practical implications – The study highlight the importance of financial literacy in promoting access to finance, which is necessary for growth of SMEs in developing economies. Owners of SMEs could attend financial literacy programs provided by entrepreneurial skill development organizations to enable them to acquire financial knowledge and skills so as to make wise and better financial decisions and choices.

Originality/value – The study contributes to existing international entrepreneurship literature by indicating the moderating effect of financial literacy in the relationship between access to finance and growth of SMEs in developing economies. The study shows that for SMEs to access finance in order to grow there is need for financial literacy that promotes effective and efficient use of loans/credits. SMEs in developing economies need financial literacy, which helps them to make wise financial decisions and choices before accessing financial services like loans.

Key words: Financial literacy, Developing economies, Access to finance, SMEs, Uganda, Entrepreneurship

Paper type: Research paper

Introduction

Scholars such as Abor & Quartey (2010) suggest that Small and Medium Enterprises (SMEs) promotes economic development, especially in developing economies. World Bank (2015) observes that SMEs contributes up to 45% to total employment and 33% to national income in developing economies.

However, scholars such as Schiffer & Weder (2001); Cressy (2002); and Beck et al., (2008) have argued that the role of SMEs in economic development has been limited by lack of access to financial services, especially from formal financial institutions. This is due to the low level of financial literacy among SMEs owners and managers. Thus, De Mel, McKenzie & Woodruff (2012) observe that financial literacy

through business training, results into acquisition of financial knowledge and business skills necessary for SMEs' growth in developing countries (see also Balarezo & Nielsen, 2017; Bruhn, Karlan & Schoar, 2010).

Not only have SMEs developed strong capabilities to compete locally, but they also internationalize and compete globally. The literature on born global or early internationalizing firms highlights the ability of SMEs to identify opportunities in the international markets from their very inception (see for example Dow, 2017; McDougall, 1989; McDougall & Oviatt, 2000; Oviatt & McDougall, 1994). For this international strategy to be implemented, SMEs need to develop financial literacy to understand and execute an effective plan for accessing finance. Indeed, Fatoki (2014) believes that financially literate SMEs owners tend to make better financial decisions with fewer management mistakes than their counterparts who are financially illiterate. This is supported by Okello, Ntayi, Munene & Nkote (2016) who found that financial literacy helps individuals to make wise financial decisions and choices, which improves access and use of financial services by SMEs. Furthermore, the MasterCard (2011) also observes that financial literacy helps SMEs owners to evaluate financial products and, thus, make informed decisions that facilitate proper debt management among SMEs owners. Low level of financial literacy can prevent SMEs from adequately assessing and understanding different financing options, and from navigating complex loan application procedures.

Findings by Karlan & Valdivia (2011) indicate that business education program for female micro entrepreneurs in Peru improved recordkeeping of SMEs. This is consistent with Drexler, Fischer & Schoar (2011) who found that basic rules of-thumb-based training in financial literacy results into improvement in business outcomes among SMEs in Dominican Republic. Besides, Bruhn & Zia (2011) contend that formal business and financial training improved business practices and investments among medium-scale enterprises in Bosnia-Herzegovina. Thus, it can be argued that financial literacy, which entails acquisition of financial knowledge and skills, helps SMEs owners to make wise financial decisions and choices.

Previous studies such as Abor & Quartey (2010); Karlan & Valdivia (2011); Drexler, Fischer & Schoar (2011); Aghion & Bolton (1997); Kevane & Wydick (2001); Schiffer & Weder (2001); Cressy (2002); Beck et al., (2008), Lois & Annette (2005) have examined the impact of access to finance on growth of SMEs in both developed and developing economies. However, these studies ignore the moderating role of financial literacy in the relationship between access to finance and growth of SMEs in developing economies. Additionally, Adomako, Danso & Ofori (2016) also examined the moderating influence of financial literacy on the relationship between access to finance and firm growth in Ghana. However, their study focused basically on SMEs in general and was not firm specific. Besides, their study was conducted in Ghana with different institutional settings compared to Uganda. Similarly, Uganda Investment Authority (2016) also argues that 80% of SMEs in Uganda fail to survive and cease to operate within the first year of their inception, partly because of poor investment decision making and choices, which may not be the case in other countries in the region, such as Ghana. Theoretically, Schumpeter (1991) defines an entrepreneur as someone who establishes a new business to produce a new product or to make an old product in a new way. Schumpeter argues that an entrepreneur is an innovator, not an imitator in production and, as an innovator, naturally he is monopolist. Since economic progress comes from innovations, innovator monopolist should be protected and entrepreneurship should be encouraged. Thus, entrepreneurs need financial resources in the economic process in order to exploit opportunities that exist in markets. However, entrepreneurship theorist such as

Schumpeter ignores factors such as financial literacy that helps innovative entrepreneurs to make investment decisions in economic process.

Therefore, the main purpose of this study is to explore and understand the moderating role of financial literacy in the relationship between access to finance and growth of SMEs engaged in agriculture in developing economies with a specific focus on Uganda. Financial literacy helps managers to make strategic investment decisions and choices that can enable their firms to grow and prosper. The study revealed that financial literacy significantly moderate the relationship between access to finance and growth of SMEs in developing economies. Thus, this study contributes to existing international entrepreneurship literature by showing the powerful role of financial literacy in promoting access to finance and growth among SMEs in developing economies. It helps managers of SMEs to acquire knowledge, skills and ability to strategize their financial decisions and choices. Furthermore, it prepares SMEs for tough financial times through strategies that mitigate risk such as avoiding over indebtedness.

Review of related literature and hypotheses development

Access to finance and financial management has been identified in many business surveys as the most important factor in determining the survival and growth of SMEs (IFC, 2010; OECD, 2006). Beck & Demirguc-Kunt, (2006) argue that access to finance allows SMEs in developing economies to undertake productive investments to expand their businesses and to acquire the latest technologies, thus ensuring their competitiveness, and fostering innovation, macro-economic resilience, and GDP growth. Kevane & Wydick (2001) also suggest that provision of credit to micro enterprises encourages economic growth in the informal sector through promoting increased capitalization of business, creating employment opportunities, and long-term income growth. This is supported by Aghion & Bolton (1997) who argue that more credit means more entrepreneurship, more firm formation, and economic growth.

Scholars such as Tiwari, Shahbaz & Islam (2013) postulate that provision of financially disadvantaged families with low cost loans and increasing access to various sources of funding, which is used for business growth can lead to poverty reduction and employment creation (see also Davidsson, Achtenhagen & Naldi, 2010). A study by World Bank (2013) indicate that access to finance improved firm performance and growth by facilitating market entry, risk reduction, promoting innovation, and entrepreneurial activity in developing economies. Therefore, we can hypothesize that:

H1: Access to finance significantly affects growth of SMEs in developing economies.

Financial literacy can be an important determinant of access to finance (Cole & Fernando, 2008). Low levels of financial literacy may prevent the take-up of more complicated financial products such as insurance, since clients may be hesitant to buy a product whose utility they do not fully comprehend.

De Mel, McKenzie & Woodruff (2008) argue that financial literacy through business skills acquisition are important driver of SMEs' growth and a key determinant of productivity. Financial literacy referred to as 'ability to obtain, understand and evaluate the relevant information necessary to make financial decisions and choices with an awareness of the likely financial consequences' is critical for access to financial services by SMEs in developing economies.

Njoroge & Gathungu (2013) further contend that individuals with financial literacy skills tend to make better financial decisions with fewer management mistakes than their counterparts who are financially illiterate. Thus, sound financial management is critical to the survival and management of SMEs because financial literacy skills empowers and educates SMEs owners so that they can evaluate financial products and make informed decisions. Besides, financial literacy also builds the risk management skills of SMEs owners. Siekei et al., (2013) elucidate that financial literacy prepares SMEs owners for tough financial times through strategies that mitigate risk such as accumulating savings, diversifying assets, and avoiding over indebtedness.

Therefore, we can conclude that financial literacy among SMEs owners and managers is critical in ensuring that SMEs grow from small and medium to large enterprises, and we hypothesize that:

H2: Financial literacy significantly affects access to finance by SMEs in developing economies.

United Nations (2003) states that financial literacy, which is the ability to use knowledge and skills to manage financial resources, is a key ingredient to financial success of SMEs in developing economies, especially as a tool for fighting poverty. Scholarly work shows that SMEs run by financial literate entrepreneurs have a higher chance of being more successful than those run by illiterate counterparts.

Financial literacy enables managers and owners of SMEs in developing economies to make appropriate financial decisions and choices about the complex financial products offered by the financial systems without being intimidated. A compelling body of evidence demonstrates a strong association between financial literacy and entrepreneurs' success.

Scholars like Lusardi & Tufano (2009); Moore (2003) observe that financial literacy helps managers of SMEs in developing economies to acquire knowledge, skills, and ability to financially strategize their financial decisions and choices. Nunoo & Andoh (2012) found that financial literacy positively affects SMEs performance in Ghana, who tend to save more and have better risk management by purchasing insurance contracts. This is consistent with a study by Simeyo et al., (2011), which revealed that financial literacy training among micro enterprises in Kenya had a significant positive impact on their performance. Thus, financial literacy facilitates SMEs expansion and enhances their profitability, productivity and competitive advantage. Hence, here we derive the hypothesize that:

H3: Financial literacy significantly affects growth of SMEs in developing economies.

Lack of business management skills can magnify financial barriers for SMEs. Low degree of financial literacy can prevent the performance level of SMEs from adequately assessing and understanding different financing provision, and for navigating complex loan application procedures.

According to Bosma & Harding (2006), many SMEs in developing countries fail because they lack financial literacy and they have insufficient business acuity, which undermines entrepreneurial activity. Indeed, Spinelli, Timmons & Adams (2011) observe that financing literacy is identified as one of the critical managerial competencies in SMEs firm and development.

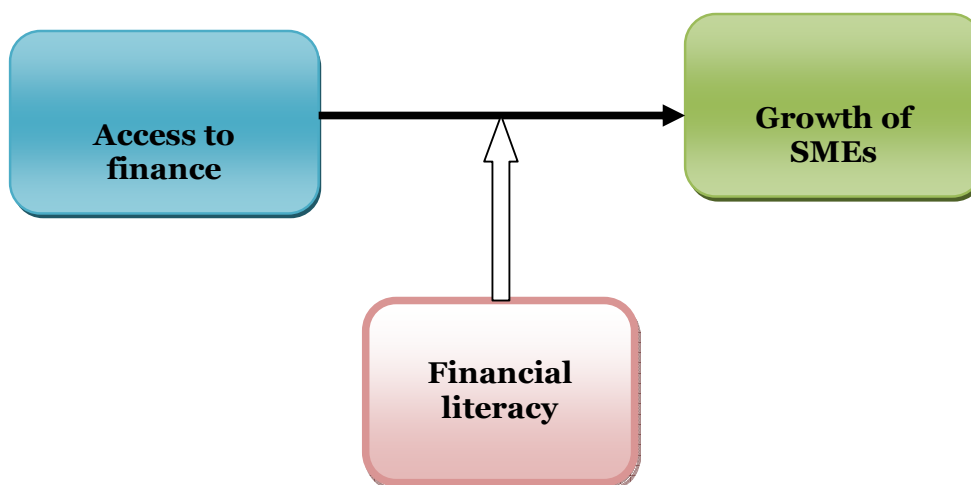
Oseifuah (2010) suggests that entrepreneurs, regardless of their age, consistently engaged in decision-making activities concerning resource procurement, allocation, and utilization. Such activities always have financial consequences and thus, in order to be effective, entrepreneurs must be financially literate.

Additionally, scholars like Fidler & Webster (1996) argue that basic business skill training is critical in accompanying the provision of micro loans to improve the capacity of SMEs managers to use the loans. Besides, it also provides with knowledge in more effective use of financial products and services. This reduces their vulnerability to overzealous financial institutions and fraudulent schemes.

This is supported by Mutegi & Phelister (2015) who revealed that financial literacy facilitates the decision making processes such as payment of bills on time, proper debt management, which improves the credit worthiness of SMEs to support livelihoods, economic growth, sound financial systems, and poverty reduction. Siekei (2013) also states that credit management skills obtained through financial literacy programme helps SMEs owners in management of loan portfolios to ensure that loan liability is minimized and interest expenses minimized. Financial literacy helps SMEs owners to acquire financial knowledge and skills necessary for business planning, initiating savings plan, and making strategic investment decisions (Greenspan, 2002). Thus, proper application of financial knowledge and skills helps SMEs owners in developing economies to meet their financial obligations through planning, resource allocation, and utility derivation. Therefore, we derive the hypothesis that:

H4: Financial literacy significantly moderates in the relationship between access to finance and growth of SMEs in developing economies.

Figure 1: Conceptual model for the study



Methodology

The current study adopted the use of cross sectional research design to establish the moderating effect of financial literacy in the relationship between access to finance and growth of SMEs in developing economies. Thus, to test the hypotheses set under this study, data were collected from 169 SMEs located in Jinja and Iganga Districts, in eastern Uganda. This is justified by the fact that most microfinance banks that provide SMEs loans have many branches located in the eastern districts of Jinja and Iganga.

SMEs in Uganda account for 90% of the total employment and contribute about 4.6% to the country's GDP (Ernst & Young, 2011). Businesses that have 5 to 50 employees are considered to be small businesses, and those employing 51 to 500 people are considered to be medium sized. There are 300 registered SMEs located in Jinja and Iganga Districts in eastern Uganda (Gem Report, 2014). For the purpose of this study, 169 SMEs were selected from a population of 300 SMEs based on sample size determination Krejcie & Morgan (1970). Therefore, a total sample of 169 SMEs was used in this study.

Simple probability sampling method was used to select SMEs for this study. Data were collected from a total of 169 SMEs located in Jinja and Iganga Districts. Before the main study, the questionnaire was pre-tested in Bugembe main market. Therefore, only concise, simple and short questions were retained in the questionnaire for the final study. SMEs were the unit of analyses, while SMEs owner managers were the unit of inquiry. Thus, 100% response rate was realized in the study.

The study used a semi-structured questionnaire with items adopted from past studies, which were deemed reliable and valid. The results generated indicated that access to finance, financial literacy, and financial inclusion had Cronbach alpha coefficient of 0.848, 0.970, and 0.988 respectively (Cronbach, 1951).

Measures for the variables under this study were adopted from past studies. The dimensions of accessibility, usage, quality (relevance), and welfare impact were used to measure access to finance (Claessens, 2006; Beck et al., 2008; Ardic et al., 2011). Besides, financial literacy was measured using the dimensions of knowledge, skills, attitude, and behaviour as adopted from Atkinson & Messy (2014), Lusardi & Mitchell (2014), Holzmann (2010). Furthermore, growth of SMEs was measured using the dimensions of sale and assets as adopted from Davidsson et al., (2006) and Delmar et al., (2003). The items included in the questionnaire were put on a 5 point likert scale with 1-strongly disagree, 2-disagree, 3-not sure, 4-agree, and 5 strongly agree.

The raw data collected from the field were captured into SPSS data analysis software and checks for data entry errors, missing values, outliers, and normality were carried out. Frequencies for the different items were generated to check for missing data. The results showed that the data were missing completely at random at less than 5 percent, which is recommended for replacement (Field, 2005). Thus, linear interpolation data replacement method was used to replace the missing data (Hair et al., 2010). Similarly, Box plots were used to test for existence of outliers in the data. The results indicated that there were no outliers in the data. Besides, the histogram, normal p-p plots, and scatter plots were used to test for normality in the data. The results indicated that the histogram was bell-shaped, indicating that the data were normally distributed. The normal p-p plots revealed that the data were normal since most observed values were falling along the straight line. In addition, the scatter plots results also showed that most cases are clustered together and seems to fall within the vicinity of other points hence, showing signs of association between the cases.

Test for common method bias was performed to ensure that the items used in the study are free from errors (Podsakoff et al., 2003). Procedural remedy was adopted to solve the problem of common method bias. All ambiguous/unfamiliar terms were defined and vague concepts were removed by keeping questions simple, specific and concise, avoiding double barreled questions, and decomposing questions into simpler more focused questions (Tourangea et al., 2000). Thus, common method bias that can cause type 1 and 2 errors was not a problem in the data.

Exploratory factor analysis (EFA) was performed on all variables under study by running principal component analysis based on the extraction method using Varimax with Kaiser Normalization. This was done to determine convergent and divergent validity among items under all constructs used in this study. The results of the EFA indicated that two items loaded well onto ease of access (11%), while two other items loaded well onto usage (12%), and three items loaded well onto quality/relevance (15%), with three other items loading well onto the construct of welfare impact (22%). Besides, the results also showed that seven items loaded well onto behaviour (44%), two items loaded well onto attitude (12%), two other items loaded well onto skills (12%), and two other items loaded well onto knowledge (12%). In addition, the results also revealed that five items loaded well onto the construct of sales, and five other items loaded well onto the construct of assets. The EFA and the descriptive results are indicated in the appendix section.

Baron & Kenny (1986) observe that for interaction to exist, the effect of predictor variable on the outcome variable should vary as a function of change in the moderator variable. Additionally, Jose (2008) also argues that test for interaction should be performed by centring the predictor variables and the product of the centred variable should be obtained to generate the interaction term. The predictor variable and outcome variable in this study were centred to obtain their marginal means. Besides, the interaction term was generated by getting the product of marginal means of predictor variables and outcome variable. Therefore, based on the rule of interactions, if the beta coefficient of the interaction term is significant, then there is proof of existence of interaction in the model.

Furthermore, Jose (2008) stipulates that the interaction effect should be graphically depicted by plotting the moderation effect on ModGraph excel programme for moderation. This helps to confirm whether there is interaction effect between the independent, moderator, and dependent variables in the model. Thus, the lines should not be parallel and the magnitude of an effect should be greater at one level of a variable than at another (1991). This implies that interaction is present and significant.

Results and discussion

Demographic characteristics

The results from the study revealed that majority (71%) of the respondents were female, while 29% were male. Besides, the findings indicated that 35% of the respondents were in the 30-39 years age bracket, while 27% were in 40-49 years age bracket, and 25% were in 20-29 years age bracket. In addition, the results also showed that 12% were in the 50-59 years age bracket, while only 1% in the 60+ age bracket.

Furthermore, the findings from the study also indicated that 43% of the respondents had attained certificate level of education, while 21% had attained diploma and advanced level of education respectively. More so, 11% had attained

ordinary level of education and 4% had bachelors' degree, with only 1% who had attained post graduate level of education.

In terms of business ventures, the results revealed that 34% were involved in trade and commerce, 25% in transport, 17% in farming, 12% in service industry, 5% in welding, 4% in carpentry, 2% in selling clothes, and 1% in restaurant and crafts respectively. Besides, the results showed that majority (99%) of the business were operated by owner managers, and only 1% operated by non-owner. Further analysis of the findings revealed that 85% of the respondents had business training and 15% did not attend business training.

Table 1: Demographic characteristics of respondents

	<i>frequency</i>	<i>percentage</i>	<i>cumulative %</i>
<i>Gender</i>			
Male	120	71.0	71.0
Female	49	29.0	
	100.0		
Total	169	100.0	
<i>Age</i>			
20-29	42	24.9	24.9
30-39	59	34.9	59.8
40-49	46	27.2	87.0
50-59	21	12.4	99.4
60-above	1	0.6	100.0
Total	169	100.0	
<i>Education level</i>			
Post graduate	1	0.6	0.6
Bachelors degree	6	3.6	4.1
Diploma	35	20.7	24.9
Certificate	73	43.2	68.0
A-Level	35	20.7	88.0
O-Level	19	11.2	100.0
Total	169	100.0	
<i>Business venture</i>			
Service industry	21	12.4	12.4
Transport	42	24.9	37.3
Farming	29	17.2	54.4
Trade and commerce	57	33.7	
	88.2		
Welding	9	5.3	93.5
Carpentry	6	3.6	97.0
Restaurant	1	0.6	97.6
Craft	1	0.6	98.2
Clothes	3	1.8	100.0
Total	169	100.0	
<i>Business training</i>			
Yes	143	84.6	84.6
No	26	15.4	100.0
Total	169	100.0	
<i>Business ownership</i>			

Owners	168	99.4	99.4
None owners	1	0.6	100.0
Total	169	100.0	

The main purpose of this study is to establish the moderating effect of financial literacy in the relationship between access to finance and growth of SMEs in developing economies with a specific focus on Uganda. Thus, Pearson's zero order correlation and hierarchical regression analysis were adopted to examine the relationships between the independent, moderator, and dependent variables and to determine their effects on the outcome variable. The results are indicated in table 2 and 3 below.

Table 2: Descriptive statistics and Pearson's Zero order correlations matrix

<i>Variables</i>	Mean	SD	1	2	3
Access to finance (1)	3.636	.565	1.000		
Financial literacy (2)	3.820	.482	.159*	1.000	
Growth (3)	3.603	.202	.199**	.934**	1.000

* Significance level at 0.05 level (2-tailed); ** Significance level at 0.01 level (2-tailed); n = 169

Access to finance and growth of SMEs

The main purpose of the study is to establish the relationship between access to finance and growth of SMEs in developing economies. The results indicated that there is a positive and significant association between access to finance and growth of SMEs in developing economies ($r = .199$, $p \leq .01$). This implies that access to finance has an impact on growth of SMEs, thus, our hypothesis (H1) of the study was supported. Access to finance by SMEs in developing economies helps them to increase their income, build viable businesses, and reduce their vulnerability to external shocks. Beck et al., (2008) suggest that access to finance by SMEs helps them to realize growth in output, employment generation, profitability, efficiency, exports, productivity and return on assets.

Financial literacy and access to finance by SMEs

Further, the zero order correlation results indicated a positive and significant relationship between financial literacy and access to finance ($r = .159$, $p \leq .05$). This means that financial literacy influences access to finance by SMEs in developing economies. This lends support to our hypothesis (H2) of the study, which states that financial literacy significantly affects access to finance by SMEs in developing economies. The findings supports the statement that financial literacy is the ability to obtain, understand and evaluate relevant information necessary to make financial decisions and choices with an awareness of the likely financial consequences. Indeed, Siekei et al., (2013) argue that financial literacy prepares SMEs owners for tough financial times through strategies that mitigate risk such as avoiding over indebtedness. Thus, financial literacy enables SMEs managers to make appropriate financial decisions and choices about complex financial products offered by the financial systems without being intimidated.

Financial literacy and growth of SMEs

Besides, the results showed that financial literacy and growth of SMEs in developing economies are positively and significantly related ($r = .934$, $p \leq .01$), therefore, supporting our hypothesis (H3) of the study, which states that financial literacy significantly affects growth of SMEs in developing economies. Financial literacy, which is the ability to use knowledge and skills to manage financial resources effectively for a lifetime of financial well-being, is a key ingredient to financial success of SMEs, especially as a tool for fighting poverty in developing economies. Indeed, existing scholarly work shows that SMEs run by financial literate entrepreneurs have a higher chance of being more successful than those run by illiterate counterparts.

Furthermore, hierarchical regression model was adopted to explain the predict effects of independent and moderator variables on the outcome variable. The results generated are shown in table 3 below.

Table 3: Hierarchical regression model for the interaction effect

Variables	Model 1	Growth Model 2	Model 3	VIF
Constant	2.778	1.227	.604	
Access to finance (Main effect)	.235**	.174**	.199**	1.000
Financial literacy (Moderator)		.624**	.393**	1.018
Interaction term			.147*	1.018
R ²	.040	.191	.279	
ΔR^2		.151	.088	
ΔF	6.910**	31.139**	.327	

* $P < .05$; ** $P < .01$; $n = 169$

The results in table 3 above indicated that there is a significant relationship between access to finance and growth of SMEs in developing economies ($\beta = .199$, $p < .01$). This supports our hypothesis (H1) of the study, which states that access to finance significantly affects growth of SMEs in developing economies.

OECD (2006) & IFC (2010) argue that access to finance is necessary for creation of economic environment that enables firms to grow and prosper. Increased access to finance for SMEs can improve economic conditions in developing countries by fostering innovation, macro-economic resilience, and GDP growth. According to Kevane & Wydick (2001), provision of credit to micro enterprises encourages economic growth in the informal sector through promoting increased capitalization of business, creating employment opportunities, and long-term income growth. This is supported by Aghion & Bolton (1997) who observe that more credit means more entrepreneurship, more firm formation, and economic growth.

In addition, the regression results also revealed that financial literacy has a significant effect on access to finance by SMEs in developing economies ($\beta = .624$, $p < .01$). The results lend support to our hypothesis (H2) of the study. This finding is in line with Njoroge & Gathungu (2013) who argue that SMEs managers with financial literacy skills tend to make better financial decisions with fewer management mistakes than their counterparts who are financially illiterate. Thus, sound financial management is critical to the survival and management of SMEs because financial literacy skills empowers and educates SMEs owners so that they are able to evaluate financial products and make informed decisions.

The results also showed that there is a significant impact of financial literacy on growth of SMEs in developing economies ($\beta = .393$, $p < .01$). This supports our hypothesis (H3) of the study. Financial literacy, which is the ability to use financial knowledge and skills to manage financial resources effectively, is a key ingredient to financial success of SMEs, especially as a tool for fighting poverty (United Nations, 2003). SMEs run by financial literate entrepreneurs have a higher chance of being more successful than those run by illiterate counterparts. Financial literacy enables managers and owners of SMEs in developing economies to make financial decisions and choices about the complex financial products offered by the financial systems without being intimidated. A compelling body of evidence demonstrates a strong association between financial literacy and entrepreneurs' success in developing countries. Scholars like Lusardi & Tufano (2009); Moore (2003) argue that financial literacy helps managers of SMEs to acquire knowledge, skills, and ability to financially strategize in order to make financial decisions and choices. Thus, financial literacy facilitates SMEs expansion and enhances their profitability, productivity and competitive advantage.

Financial literacy: moderator between access to finance and growth of SMEs

More so, the hierarchical regression results indicated that financial literacy significantly moderates in the relationship between access to finance and growth of SMEs in developing economies. The interaction effect between financial literacy and access to finance is positive and significant ($\beta = .147$, $p < .05$) since the magnitude of an effect has increased from one level to another. Indeed, Aiken & West (1991) stipulate that two variables interact if a particular combination of these variables leads to results that would not be anticipated on the basis of the main effects of those variables.

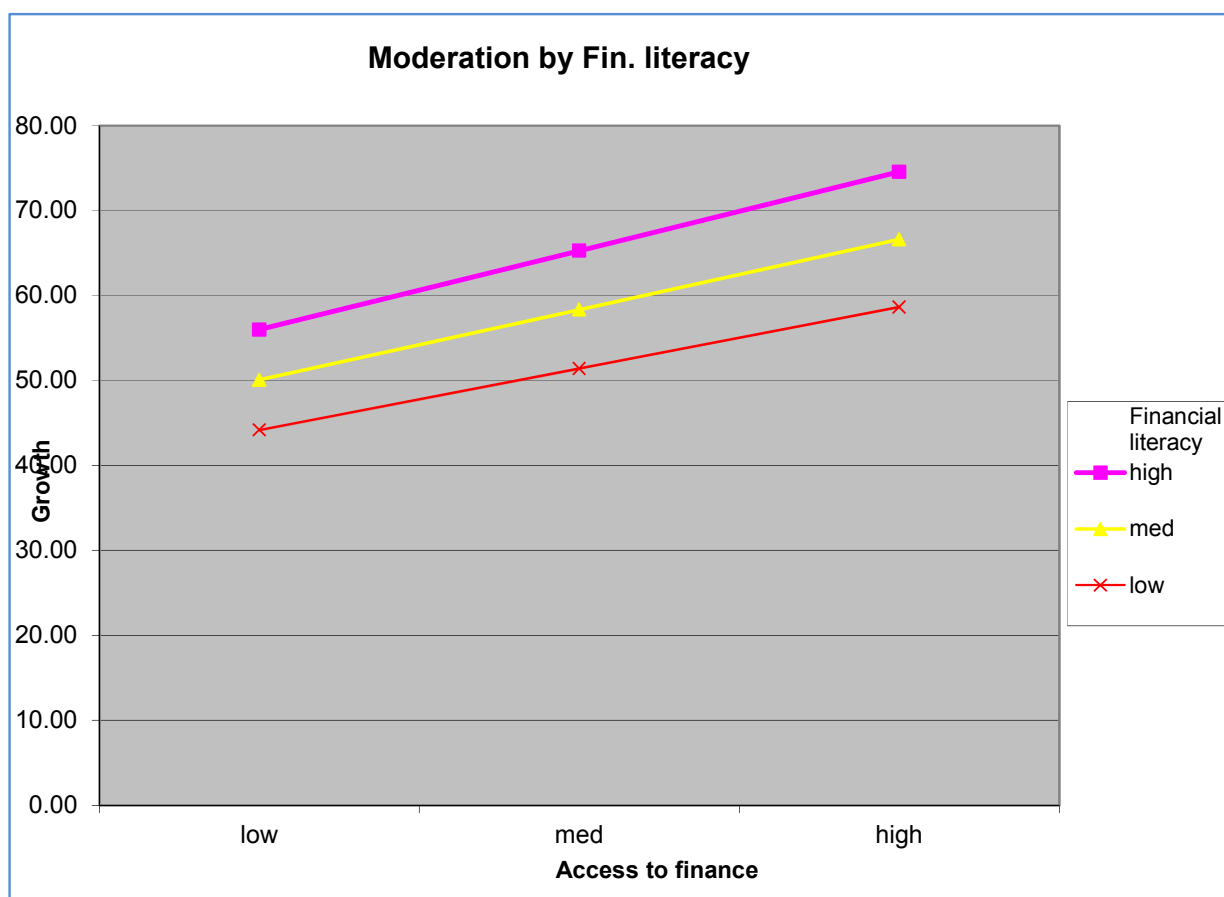
The findings indicated that the interactive term as a result of including financial literacy as a moderator boosted the main effects (access to finance) by 8.8% to explain variation in growth ($\Delta R^2 = 0.088$). The inclusion of interactive term between access to finance and financial literacy increased the predictive power of access to finance by 8.8% as indicated by an increase from 19.1% to 27.9%. Thus, this result showed that the interactive term boosted the main effect to explain variance in growth of SMEs in developing economies like Uganda.

Therefore, since the interaction effect is significant and positive in the last model (model 3), we can conclude that our hypothesis (H4) of the study is supported. Indeed, Spinelli et al., (2011) argue that financial literacy is identified as one of the critical managerial competencies in SMEs firm and development in developing countries. Besides, Oseifuah (2010) suggests that entrepreneurs, regardless of their age, consistently engaged in decision-making activities concerning resource procurement, allocation, and utilization. Such activities always have financial consequences and, thus, in order to be effective, entrepreneurs in developing countries must be financially literate. In addition, Fidler & Webster (1996) also suggest that basic business skill training should accompany the provision of micro loans to improve the capacity of SMEs managers to use funds. Besides, it also provides greater control and more effective use of financial products and services, and reduced vulnerability to overzealous and fraudulent schemes. Similarly, also Greenspan (2002) argues that financial literacy helps SMEs owners to acquire financial knowledge necessary to create business planning, initiate savings plan, and make strategic investment decisions.

From another perspective, Jose (2008) recommends that the results from the hierarchical regression can be plotted on a ModGraph to show the interaction effect of the moderator variable in the relationship between the independent and the outcome variables. The ModGraph is derived by plotting the interaction effects of the means and standard deviations with unstandardized coefficients of main effects (access to finance), moderator (financial literacy), and the interaction term.

The rule of interaction stipulates that the graph should not be parallel or must have different gradients or slopes for interaction to be significant. Besides, the effect of the interaction can be explained based on high, medium, and low impact based on the graph generated. Thus, the graphing was performed and the results are indicated in figure 1 below. The results showed that the slopes/gradients of the interaction are were not parallel, therefore, the rule for moderation was met and tenable as stipulated by Jose (2008).

Graph 1: ModGraph for the interaction effect of financial literacy between access to finance and growth in developing economies



Conclusions and Recommendation

The results indicated that there is a significant relationship between access to finance and growth of SMEs in developing economies. Increase in access to finance by SMEs can improve economic conditions in developing countries by fostering innovation, macro-economic resilience, and GDP growth. Thus, managers of SMEs in developing economies with limited finances should consider recapitalizing their

businesses through accessing more finances from existing financial service providers such as microfinance banks.

In addition, the regression results also revealed that financial literacy has a significant effect on access to finance by SMEs in developing countries. Indeed, sound financial management is critical to the survival and management of SMEs in developing economies because financial literacy skills empowers and educates SMEs owners and managers so that they are able to evaluate financial products and make informed decisions. Therefore, managers of SMEs in developing economies should consider attending financial literacy training that will enable them to acquire knowledge and skills required to make better financial decisions and choices while operating their businesses.

Besides, the results showed that there is a significant impact of financial literacy on growth of SMEs in developing economies. Financial literacy helps SMEs to acquire knowledge, skills, and ability to financially strategize in order to make financial decisions and choices. Thus, financial literacy facilitates SMEs expansion and enhances their profitability, productivity and competitive advantage in developing economies. Hence, managers of SMEs in developing economies should endeavour to acquire financial literacy skills that will help them make investment decisions in order to grow their businesses.

Finally, the hierarchical regression results indicated that financial literacy significantly moderates in the relationship between access to finance and growth of SMEs in developing economies. Financial literacy helps SMEs owners and managers to acquire financial knowledge and skills necessary for them to create business planning, initiate savings plan, and make strategic investment decisions. Managers of SMEs in developing economies should ensure that financial literacy is a necessity before accessing financial services such as loans from banks since it helps them to use the borrowed money strategically in growing their businesses.

Limitations and Further Research

The study relies on data collected from one developing country, Uganda. Other developing countries located in other regions may face similar challenges but in a different institutional environment. Furthermore, the findings from the study are based on quantitative data collected through use of semi-structured questionnaires, and there is a possibility to better understand the reasons for why and how SMEs access and use finances.

In addition, the study was purely cross-sectional, hence ignoring the characteristics of SMEs, which could be investigated using longitudinal study design. Therefore, future studies could adopt the use of longitudinal study to investigate behaviours of SMEs in developing economies, which could have limited their access to finance.

References

- Abor, J. and Quartey, A. (2010), "Issues in SME Development in Ghana and South Africa", *International Research Journal of Finance and Economics*. Vol. 39, pp. 218-228.
- Aiken, L.S. and West, S.G. (1991), *Testing and Interpreting Interactions*. Sage, Newbury Park, CA.
- Aghion, P. and Bolton, P. (1997), "A Theory Of Trickle-Down Growth and Development. *Review of Economic Studies*. Vol. 64, pp. 151-172.
- Ardic, O.P. Heimann, M., and Mylenko, N. (2011), *Access to Financial Services and the Financial Inclusion Agenda around the World*. A Cross-Country Analysis with a New Data Set. The World Bank Financial and Private Sector Development Consultative Group to Assist the Poor January, WPS5537.
- Atkison, A. and Messy, F.A. (2014), *Assessing Financial Literacy in 12 Countries; An OECD Pilot Exercise*. Netspar.
- Balarezo, J. and Nielsen, B.B. (2017), "Scenario planning as organizational intervention: An integrative framework and future research directions", *Review of International Business and Strategy*, Vol. 27 Issue: 1, pp.2-52
- Baron, R.M. and Kenny, D.A. (1986), "The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations", *Journal of Personality and Social Psychology*, Vol. 51 No 6, pp. 1173–1182.
- Barclay, D. W., Higgins, C. and Thompson, R. (1995), "The partial least squares approach to causal modelling: Personal computer adoption and use as illustration", *Technology Studies*, Vol. 2 No. 2, pp. 285–309.
- Beck, T., Demirguc-Kunt, A. and Maksimovic, V. (2008), "Financing patterns around the world: Are small firms different?", *Journal of Financial Economics*. Vol. 89, pp. 467-487.
- Beck, T., and Demirguc-Kunt, A. (2006), "Small and medium-size enterprises: Access to finance as a growth constraint", *Journal of Banking & Finance*. Vol. 30 No. 11, pp. 2931-2943.
- Bosma, N. and Harding, R. (2006), *Global entrepreneurship monitor: GEM 2006 summary results*: Babson College London Business School.
- Bruhn, M. and Zia, B. (2011). Stimulating managerial capital in emerging markets: the impact of business and financial literacy for young entrepreneurs. *World Bank working paper*, 5642.
- Bruhn, M., Karlan, D. and Schoar, A. (2010), *What Capital is Missing in Developing Countries?* Mimeo.
- CGAP (2002), *Microfinance and the Millennium Development Goals*, Donor brief No. 9.
- Claessens, S. (2006). "Access to Financial Services: A Review of the Issues and Public Policy Objectives", *The World Bank Research Observer*, Vol. 21, pp. 207-240.
- Cole, S. & Fernando, N. (2008). "Assessing the importance of financial literacy". *Finance for the poor. A quarterly Newsletter of the Focal Point of the Microfinance*. September, Vol. 9, No. 3.
- Cressy, R. C. (2002), "Funding Gaps: An Introduction", *Economic Journal*, Vol. 112,

No. 477, Blackwell, pp. F1-F16.

Cronbach, L. J. (1951), "Coefficient Alpha and the Internal Structure of Tests", *Psychometrika*, Vol. 16, pp. 297-334.

Davidsson, P., Leona Achtenhagen, L. and Naldi, L. (2010), "Small Firm Growth", *Foundations and Trends in Entrepreneurship*: Vol. 6: No. 2, pp 69-166.

De Mel, S., McKenzie, D. and Woodruff, C. (2012), "Business Training and Female Enterprise Start-up, Growth, and Dynamics: Experimental evidence from Sri Lanka", *World Bank Policy Research Working Paper* no. 6145.

Delmar, F., Davidsson, P. and Gartner, W. (2003), "Arriving at the High-growth Firm", *Journal of Business Venturing*. Vol. 18 No. 2, pp. 189-216.

Dow, D. (2017). "Born global firms and accidental internationalists: Has Hennart (2014) opened a can of worms", *Review of International Business and Strategy*, Vol. 27, Issue 3, pp. 286-307.

Drexler, A., Fischer, G. and Schoar, A. (2014), "Keeping it simple: Financial literacy and rules of thumb". *American Economic Journal: Applied Economics*, Vol. 6(2), pp. 1-31.

Ernst and Young (2011), *2010 baseline survey of small and medium enterprises in Uganda*. Draft Final report, Uganda Investment Authority, Kampala.

Global Entrepreneurship Monitor (GEM) - Uganda, 2014.

Fatoki, O. (2014), "The Financial Literacy of Micro Entrepreneurs in South Africa", *Journal of Social Science*, Vol. 40 No. 2, pp. 151-158.

Fidler, P. and Webster, L. (1996), "The informal sector of West Africa", in Webster, L. and Fidler, P. (eds.), *The Informal Sector and Microfinance Institutions in West Africa*, Washington DC: The International Bank for Reconstruction and Development/ The World Bank, pp. 5-20.

Field, A.P. (2005), *Discovering Statistics Using SPSS*, Sage, London.

Greenspan, A. (2002), Financial Literacy: A Tool for Economic Progress. *The Futurist*, Vol. 36 No 4, pp. 37- 41.

Hair, J.F., Anderson, R.E., Tatham, R.L. and Black, W.C. (2010), *Multivariate Data Analysis*, Prentice Hall, Englewood Cliffs, NJ. 7th edition.

Holzmann, R. (2010). *Bringing Financial Literacy and Education to Low and Middle Income Countries: The Need to Review, Adjust, and Extend Current Wisdom*, World Bank, IZA and CES, available (online)

<http://hdl.handle.net/10986/27828> (Accessed September 2017).

Hussain. M. N. (2000), *Linkages between SMEs and Large Industries for Increased Markets and Trade: An African Perspective*. African Development Bank. *Economic Research Paper* No. 53. Côte d'Ivoire.

IFC, (2010), *Scaling-up SME access to financial services in the developing world*.

Financial inclusion experts group |SME finance sub-group: International Finance Corporation, World Bank Group.

Jose, E.P. (2008), *Welcome to the Moderation/Mediation Help Centre, Version 2.0*. School of Psychology, Victoria University of Wellington, Wellington.

Karlan, D. and Valdivia, M. (2011), "Teaching Entrepreneurship: Impact of Business Training on Microfinance Institutions and Clients". *Review of Economics and Statistics*, Vol. 93 No. 2, pp. 510-27.

- Kasekende, L. and Opondo H (2003). *Financing Small and Medium Scale Enterprises (SMEs). Uganda's Experience*. Working Paper, Kampala: Bank of Uganda.
- Kempson, E. (2006). "Policy Level Response to Financial Exclusion in Developed Economies: Lessons for Developing Countries", paper presented at the conference, *Access to Finance: Building Inclusive Financial Systems*, World Bank, Washington, D.C.
- Kendall, J., Mylenko, N. and Ponce, A. (2010). Measuring Financial Access around the World: *Policy Research Working Paper 5253*: The World Bank Financial and Private Sector Development Financial Access Team March 2010.
- Kevane, M., Wydick, B. (2001). "Microenterprise Lending to Female Entrepreneurs: Sacrificing Economic growth for Poverty Alleviation?", *World Development*, Volume 29(7): 1225-1236.
- Khan, J., & Jawaid, G. (2004). Clusters and Entrepreneurship: Implications for Innovation in a Developing Economy, *J. Dev. Entrepr.* 9(3):201-219.
- Krejcie, R.V. and Morgan, D.W. (1970), *Determining Sample Size for Research Activities, Educational and Psychological Measurement*, Sage Publications.
- Lois, S., & Annette, A. (2005). Support for Growth-oriented Women Entrepreneurs in Uganda. *International Labour Organization*, Geneva, Switzerland.
- Lusardi, A.; Mitchell, O. (2014). The Economic Importance of Financial Literacy: Theory and Evidence. *Journal of Economic Literature*.
- Lusardi, A., & Tufano, P. (2009). *Debt literacy, financial experiences, and over indebtedness*. Cambridge Mass. <http://dx.doi.org/10.3386/w14808>
- MasterCard (2011). Taking Stock: Financial Education Initiatives for the Poor.
- McDougall, P. P. (1989), "International versus Domestic Entrepreneurship: New Venture Strategic Behavior and Industry Structure". *Journal of Business Venturing*, Vol. 4, pp. 387-400.
- McDougall, P.P. and Oviatt, B.M. (2000), "International entrepreneurship: The intersection of two research paths", *Academy of Management Journal*, Vol. 43, pp. 902-08.
- Moore, D. (2003). *Survey of financial literacy in Washington State: knowledge, behavior, attitudes, and experiences*. Technical Report no. 03-39, Social and Economic Sciences Research Center, Washington State University.
- Mutegi, K. and Phelister, N. (2015). Financial literacy and its impact on loan repayment by small and medium entrepreneurs. *International journal of economics, commerce and management United Kingdom*.
- Namatovu, R.W. (2010). Global Entrepreneurship Monitor: *GEM Uganda 2010 Executive Report*. GEM Uganda .
- Njoroge, C. W. and Gathungu, J. M. (2013), "The Effect of Entrepreneurial Education and Training on Development of Small and Medium Size Enterprises in Githunguri District - Kenya", *International Journal of Education and Research*, 1 (8), 1 – 22.
- Nunoo, J. and Andoh, F.K. (2012). "Sustaining Small and Medium Enterprises through Financial Service Utilization: Does Financial Literacy Matter?" Available (online):

<http://ageconsearch.umn.edu/bitstream/123418/2/Sustaining%20SME%20article.pdf%20Jacob%20Nunoo1.pdf> (Accessed September 2017),

Organization for Economic Cooperation and Development, (2006a). *Financing SMEs and Entrepreneurs*. OECD Policy Brief.

Organization for Economic Cooperation and Development, (2006b), *The SME Financing Gap, Volume I, Theory And Evidence*, OECD, 2006.

Okello, G.C.B., Ntayi, J.M., Munene, J.C. and Nkote, N.I. (2016), “Financial Inclusion in Rural Uganda: Testing Interaction Effect of Financial Literacy and Networks”, *Journal of African Business*, Vol. 17 Issue 1, pp. 106-128.

Okello-Obura, C., Minishi-Majanja, M.K., Cloete, L.M. & Ikoja-Odongo, J.R. (2008), “Sources of business information and means of access used by SMEs in Uganda: the case of Northern Uganda”, *LIBRES Library and Information Science Research Electronic Journal*, Vol. 18 No. 1, pp. 1-28.

Oseifuah, K. E. (2010). Financial literacy and youth entrepreneurship in South Africa. *African Journal of Economic and Management Studies*, 1(2), 164–182.

Oviatt, B.M. and McDougall, P.P. (1994), “Toward a theory of international new Ventures”, *Journal of International Business Studies*, Vol. 25 No. 1, pp. 45-64.

Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y., and Podsakoff, N.P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879-903.

Schiffer, M., & Weder, B. (2001), Firm Size and the Business Environment: Worldwide Survey Results, *IFC discussion paper* number 43.

Schumpeter, J.A. (1991), *Essays on Entrepreneurs, Innovations, Business Cycles and The Evaluation of Capitalism*. New Brunswick and London, Transactions Publications.

Sieki, J., Wagoki, J. and Kalio, A., (2013). An Assessment of the role of financial literacy on Performance of Small and Micro Enterprises: Case of Equity Group Foundation Training Program on MSEs in Njoro district Kenya. *Journal of Economics & Finance*, VOL.1, No.7.

Simeyo, O., Lumumba, M., Nyabwanga, R. N., Ojera P. and Odondo, A. J. (2011). Effect of Provision of Microfinance on performance of micro enterprises: A study of Youth micro-enterprises under Kenya Rural Enterprise Program(K-REP), Kisii County, *African Journal of Business Management* Vol. 5(20), pp. 8290-8300.

Spinelli, S., Timmons, J. A. and Adams, R. J. (2011) *New venture creation: Entrepreneurship for the 21st century*. Ninth edition.

Tiwari, K.A., Muhammad Shahbaz, M. and Islam, F., (2013) “Does financial development increase rural-urban income inequality?: Cointegration analysis in the case of Indian economy”, *International Journal of Social Economics*, Vol. 40 Issue: 2, pp.151-168.

Tourangeau, R., Rips, L. J. and Rasinski, K. (2000). *The psychology of survey response*. Cambridge, England: Cambridge University Press.

Turyahebwa, A., Sunday, A., & Ssekajugo, D. (2013): Financial Management Practices and Business Performance of Small and Medium Enterprises in Western Uganda. *African Journal of Business Management*. Academic Journals. Vol.7, No 38.

Tushabomwe-Kazooba, C. (2006). “Causes of Small Business failure in Uganda: A

Case Study from Bushenyi and Mbarara Towns” *African Studies Quarterly* 8(4). [online] URL: <http://web.africa.ufl.edu/asq/v8/v8i4a3.htm>.

Uganda Investment Authority-UIA, (2016), SMEs Driving the Economy. *Quarterly Bulletin*, Kampala, Uganda.

Uganda Bureau of Statistics National Business Survey (2014).

Uganda Investment Authority-UIA, (2016), SMEs Driving the Economy. *Quarterly Bulletin*, Kampala, Uganda.

United Nations (2003), World Population Prospects: The 2002 Revision Population Database, Population Division, United Nations, New York, <http://esa.un.org/unpp/p20kdata.asp>, accessed 2 February, 2005.

USAID, (2009), Development of strategy options for SME financial literacy - Final Report. Retrieved from http://pdf.usaid.gov/pdf_docs/PNADP093.pdf

World Bank, (2015), Small and Medium Enterprises (SMEs) Finance: The World Bank Key Messages Bulletin: The World Bank DC, Washington

World Bank. 2013. *Doing Business 2014: Understanding Regulations for Small and Medium-Size Enterprises*. Washington, DC. Retrieved from

http://www.doingbusiness.org/data/exploreeconomies/albania/~media/gia_wb/doing%20business/documents/profiles/country/ALB.pdf?ver=2

World Bank (2005): “Global development finance: mobilizing finance and managing vulnerability”, IBRD/World Bank.

World Bank (2005): “World Development Indicators 2005”, IBRD/World Bank.

Appendix

Exploratory factor analysis for financial literacy

Items	behaviour	attitude	skills	knowledge
We have the ability to analyze our financial performance periodically	.960			
My enterprise makes monthly income returns to the lender	.947			
I receive training on proper book keeping skills	.906			
My enterprise has bought formal insurance for our businesses	.896			
The management of this business can compute the cost of its loan funds	.870			
My enterprise operates a savings account	.843			
The entrepreneur can prepare basic books of accounts	.801			
The firm is aware of the operations of lending firms relating to our financial needs		.836		
Am aware of the costs and benefits of accessing credit		.835		
The firm is able to correctly calculate interest rates on my loan payments			.869	
We have required skills to ascertain the financial trends of the firm			.743	
We have skills of minimizing losses by minimizing bad debts				.868
The manager of this business has basic accounting knowledge				.801
Total variance explained				
Percentage of variance	47.942	13.461	11.244	7.847
Cumulative percentage	47.94	61.404	72.648	80.494
Eigen values	6.233	1.750	1.462	1.020

Notes:

Extraction method: Principal component analysis

Rotation Method: Varimax with Kaiser Normalization

Rotation converged in 5 iterations

KMO = .836

n = 169

Exploratory factor analysis for access to finance

Items	welfare	quality	usage	accessibility
The financial services offered by the bank has led to improvement in our nutrition	.756			
The financial services offered by the bank has led to improved access to health services in this household	.755			
The financial services offered by the bank has enabled us pay school fees	.754			
The saving product provided by the bank is suitable for us		.801		
The savings product offered by the bank is safe for us		.719		
The loan product provided by the bank suits our needs		.692		
The terms and conditions on use of loans provided by the bank is favourable to us			.788	
The financial services provided by the bank is safe for us			.674	
The initial account opening fees charged by the bank is affordable				.785
The cost of making a trip to the bank is affordable				.747
Total variance explained				
Percentage of variance	22.109	15.270	11.624	11.210
Cumulative percentage	22.109	37.379	49.003	60.213
Eigen values	2.211	1.527	1.162	1.121

Notes:

Extraction method: Principal component analysis

Rotation Method: Varimax with Kaiser Normalization

Rotation converged in 5 iterations

KMO = .701

n = 169

Exploratory factor analysis for growth of SMEs

Items	sales growth	market	share/assets
employee growth			
The number of employees is small for the current needs of the business	.873		
We intend to increase the number of employees	.840		
The increase in the number of employees has facilitated growth of this business	.813		
There has been a double increase in the growth of our business sales this year	.732		
Overtime, we have created more avenues for exchanging goods and services	.701		
Our assets have increased this year compared to last year			.879
Our long term assets have facilitated the growth of our business			.843
We intend to acquire more assets			.811
We anticipate an increase in the growth of our business sales this year			.707
Our annual sales increase each year			.642
Total variance explained			
Percentage of variance	59.318		26.424
Cumulative percentage	59.318		85.742
Eigen values	8.932		5.374

Notes:

Extraction method: Principal component analysis

Rotation Method: Varimax with Kaiser Normalization

Rotation converged in 5 iterations

KMO = .917

n = 169

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